

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF COLORADO**

DOCKET NO. 07M-446E

PUBLIC SERVICE COMPANY OF COLORADO'S SENATE BILL 07-100  
DESIGNATION OF ENERGY RESOURCE ZONES  
AND TRANSMISSION PLANNING REPORT.

1. **Public Service Company of Colorado's (PSCo's) Designated Energy Resource Zones are Insufficient.** Public Service Company of Colorado's (Xcel Energy's) designated resource zones are too general to meet the legislative intent of SB07-100, which requires zones of sufficient specificity to allow transmission to be planned to resource areas appropriate for "development of new electric generation facilities." By designating one-third portions of Colorado's Eastern Plains and the San Luis Valley as resource zones, PSCo has not identified zones that can lead to "ensuring...reliability," "continued availability of clean, affordable, reliable electricity," and evaluation of transmission facilities that "promptly and efficiently improve...infrastructure...to meet the state's existing and future energy needs" (CRS 40-2-126).
2. The statute requires zones to be designated so that plans for construction or expansion of transmission facilities "necessary to deliver electric power consistent with the timing of development of resources" (CRS 40-2-126 (2)(b)). Since wind and many solar resources can be developed within one or two years, and transmission has not been provided in the PSCo transmission system or in the plan filed here consistent with these time frames, PSCo's designated resource zones are insufficient on their face to allow transmission to be planned and built in time frames consistent with resource development.
3. PSCo's filed application for the Pawnee-Smoky Hill upgrade (Docket No. 07A-421E) does not provide transmission to serve all resources within the zones designated, or even within PSCo's identified zone one. There is no provision in SB07-100 that allows for transmission that is "...necessary to deliver electric power consistent with the timing of the development of beneficial energy resources..." to be delayed, planned later, or subjected to protracted negotiations with third parties. The statute requires these plans to be made and submitted with applications for certificates to the PUC. The exigency of the situation the legislature addressed is emphasized in statute by the requirement that the Commission approve certificates within one hundred eighty days, or "...the application shall be deemed approved."
4. **SB07-91 Generation Development Areas should be substituted for PSCo's resource zones.** The draft task force report in response to SB07-91 has developed Generation Development Areas ("GDAs") that are

more specific and that do identify areas where transmission is insufficient and generation could be developed to the benefit of Colorado consumers at sufficient scale —1000 MW or more— to justify transmission planning and investment. The SB07-91 GDAs would also allow transmission to be planned and developed to service resource zones in which there are sufficient resources to allow competition among developers, an additional requirement of that statute and one that has potential to provide lower-cost, lower-risk, competitive results for Colorado consumers. The Commission should find PSCo's resource zones insufficient and substitute SB07-91 GDAs for PSCo's filed zones.

5. **The Pawnee to Smoky Hill CPCN represents insufficient transmission planning progress and insufficient transmission investment.** The proposed Pawnee – Smoky Hill 345 kV transmission line will allow an additional 500 MW of generation injection and transfer at the Pawnee substation when this proposed line becomes energized on or around May 31, 2013. We support it, if it can be shown at hearing to be consistent with the broader and longer term issues we raise in these comments, including the need for statewide, coordinated, long term transmission planning. However, PSCo's recent 2007 Colorado Resource Plan, filed November 15, 2007, indicates that the company would like to have a minimum 800 MW of wind power by 2015 and 1,800 MW by 2020. Note that these amounts do not include the renewable energy requirements of any other utilities in the state. It appears that PSCo's Pawnee to Smoky Hill CPCN application is inadequate to allow PSCo to acquire its proposed generation resources, not to mention providing a transmission link that is relevant to long-term, coordinated transmission requirements for total state utility resource requirements. Furthermore, given the timeframe for new transmission projects to be approved and constructed (5 years or more), the rate of transmission improvements PSCo proposes appears to be insufficient to meet PSCo consumer demand for lower-cost, stable-priced renewable energy to offset high, uncertain, and variable priced fossil fuel power generation.
6. By focusing mainly on improvements at the Pawnee substation, PSCo has essentially picked the next 500 MW of wind projects that will get built without a formal RFP process, since the projects that can interconnect at Pawnee will have a bidding advantage from a clear transmission pathway to Denver along with no system upgrade costs associated with this benefit. Colorado consumers would be better served by an open and equitable process that considered all of the generation alternatives, provided transmission plans that open multiple options for bidding cost-effective projects, and provide a diversity of options with goal of achieving the least cost resources for consumers. The Commission should consider ordering additional transmission study, plans, and applications to be filed to diversify resource choices for the benefit of PSCo's consumers. For example, in PSCo's analysis of alternatives provided by Gerry Stellern's testimony in Docket No. 07A-447E, there was no discussion of any

improvements to the Ault or Keenesburg substations, where there have been numerous wind projects proposed with active applications for interconnection. It appears that PSCo has determined that wind generation interconnected at Pawnee is better for its Colorado consumers than wind generation interconnected at the Ault or Keenesburg substations, or from its Zones 2 or 3. On what basis does the company make this determination? Does the company's filed plan explain why this is the best choice? Should we be concerned that PSCo doesn't intend to improve the transmission system at Ault and Keenesburg as well as Pawnee? Why is this zone preferred over others?

7. Most wind resources that can tie into the Pawnee substation are located north, east, or west of the substation. Arguably, the Pawnee to Smoky Hill line proposed by PSCo does not pass through the best wind resource areas, so even with this proposed new transmission, only a few projects will benefit. PSCo's filed plan and resource area analysis does not allow an in-depth analysis of where resources should or could be developed. Developers will still have to build lengthy transmission tie lines to reach Pawnee. Given that the improvement in the system represents a specific point within a huge region, projects that are located further away, even with better resources, are penalized since they will have to build longer transmission lines to tie into the Pawnee substation. This diminishes any advantage that these projects would have from their superior wind resources. Therefore, it does not appear that the proposed improvement at Pawnee has been optimized in the best interest of the consumers in Colorado.
8. **Failure to file CPCNs for new transmission to serve GDAs requires regulatory remedies.** PSCo failed to file any CPCN applications for its Zones 2 and 3. PSCo has indicated that in future filings, it will evaluate the Eastern Plains Transmission Project as a possible project to facilitate projects in Zones 2 and 3. There is no basis in the statute for PSCo's filing a plan for "later." In addition, the filed plan contains no commitment from PSCo to any evaluation process or timelines, no end point to its evaluation, and no outcome indicated that satisfies the company's obligation to provide adequate transmission services for these areas. Waiting for two years for the next planning and CPCN filing simply wastes valuable time. Given the length of time for transmission improvements to be made, PSCo should have included major transmission improvements in all of the SB07-91 identified GDAs in the current filing. Since the company did not, the Commission should require PSCo to file work plans, including timelines and interim reports, and identify the workforce or consultants it will apply to these pressing tasks, with attestation by PSCo officers that they have reviewed and are have committed PSCo to rapid and complete fulfillment of these tasks.
9. **PSCo's stakeholder comments and suggestions are largely absent from its report or plans.** PSCo states that it held meetings with

stakeholders. It held meetings at which stakeholders asked for more specific zones to be designated, based on NREL's work on resources, and provided contacts and introductions to NREL personnel who were willing to help with these tasks. PSCo's report shows no evidence that PSCo responded to this stakeholder input. Stakeholders indicated to PSCo that it should consider use of ten-year, hourly and three-year, ten-minute 80-meter wind data supplied to PSCo by WindLogics that was used for PSCo's Effective Load Carrying Capability (ELCC) and wind integration cost studies to construct wind resource areas based on data about wind resources. Stakeholders indicated that PSCo's report "Wind Integration Report for Public Service Company of Colorado," dated May 22, 2006, responding to settlement and PUC orders in Docket 04A-325E, could be found on PSCo's web page at:

<http://www.PSCoenergy.com/docs/PSCoWindIntegStudy.pdf> and that representations of study areas that should be considered for finer resolution of resources that need transmission could be found on pages 10 to 13 of PSCo's study. (Stakeholders noted that assumed gas prices on page 38 of the study averaged \$6.04 over the study year, 2007).

PSCo's SB07-100 filed report shows no evidence that it responded to this stakeholder input. Stakeholders asked that transmission be planned for each resource zone. PSCo's report shows no evidence that responds sufficiently to this stakeholder request. Stakeholders asked that PSCo's SB07-100 filing be the result of statewide coordinated planning with other Colorado utilities. PSCo's report shows no evidence that its plan is based on statewide coordinated planning as suggested by stakeholders. PSCo states that it considered information regarding the location of potential new renewable resources from stakeholders. During the stakeholder process, PSCo indicated that it did not want stakeholders to provide any confidential information. Since locations of partially developed projects are considered extremely confidential by wind developers, no wind stakeholder was able to provide specific information on specific project locations due to confidentiality considerations. Most information provided by stakeholders to PSCo was not site-specific but simply expressed interest in one of the zones, each approximately one-third of the eastern half of the state. Although PSCo held numerous stakeholder meetings, it seemed to have decided to submit its already-planned Pawnee to Smoky Hill project improvement before holding any stakeholder meetings. PSCo appeared to use stakeholder meetings to defend this decision rather than to fully consider stakeholder input that might have changed that decision. Stakeholders made a number of other proposals, suggestions and requests. PSCo's report contains no evidence that PSCo considered these suggestions and requests. See:

[http://www.interwest.org/documents/documents/2007-05-15\\_sb\\_100.pdf](http://www.interwest.org/documents/documents/2007-05-15_sb_100.pdf) . We also attach a copy of these comments to this filing as "Attachment 1"

- 10. The Commission must regulate PSCo's transmission planning process to achieve results.** Going forward, PSCo should have

additional stakeholder meetings, adequately supervised by motivated Commission regulatory staff, in which the company fashions methods to obtain stakeholder input with respect to location of development of renewable resources and provision of transmission to them within the SB07-91 GDAs. Based on work to better understand resources, development interest, and transmission options, PSCo should plan the transmission "...necessary to deliver electric power consistent with the timing of the development of beneficial energy resources located in or near such zones" (CRS 40-2-126 (2)(b)). While we understand PSCo's need to keep certain information confidential, any such process should consider all viable locations for potential new renewable resources.

11. **PSCo must integrate its transmission and generation planning under adequate regulatory supervision.** PSCo states that "transmission has become less integrated with generation planning," implying that independent power producers are responsible for this breakdown of coordination between the utility's generation and transmission planning. PSCo is responsible for this lack of coordination, both within its company and among Colorado utilities. Not having achieved the necessary integration of these functions, the Commission must supply the proper regulatory motivation for the repair of the breakdown between generation and transmission planning.
12. **The Commission must regulate PSCo to achieve a single, statewide, coordinated transmission plan.** PSCo states that it continually identifies and promotes new investment through its planning function in a "coordinated, open, transparent, and participatory manner." While we commend PSCo staff for their efforts to include stakeholder opinions in the process, there remains the problem of taking stakeholder participation seriously. (See comments on CCPG "coordinated" planning at: [http://www.interwest.org/documents/documents/2007-02-09\\_ccpg\\_ltr\\_9feb07.pdf](http://www.interwest.org/documents/documents/2007-02-09_ccpg_ltr_9feb07.pdf) and the CCPG letter response agreeing with these comments at [http://www.interwest.org/documents/documents/2007-04-19\\_ccpg\\_reply.pdf](http://www.interwest.org/documents/documents/2007-04-19_ccpg_reply.pdf).)
13. PSCo has apparently entered into a recent memorandum of understanding with Tri-State Generation and Transmission Association to partner development of the Eastern Plains Transmission Project ("ETPT"). It states that it has not had time to complete studies required for zones two and three. It states that it hopes to "pursue opportunities for joint projects" and not to duplicate efforts. The Colorado Coordinated Planning Group's (CCPG) 2006 long-range plan contained a similar unmet need to coordinate plans between PSCo and Tri-State, but nothing has happened since then to produce a single, statewide, coordinated transmission plan. The Commission must order PSCo to undertake transmission planning on a specific time frame for each GDA, motivate and require its staff supervise the process to ensure progress, and require monthly reporting by PSCo and Commission staff to closely monitor progress.

14. PSCo states that delays in transmission planning and investment are due to others and to long lead times for critical equipment orders (page 28). PSCo has previously admitted that its transmission planning fails to provide adequate service. PSCo itself documented the inadequacy of transmission service for the benefit of its consumers in its December, 2005 “Bid Evaluation Report” (pages 15 and 16) as documented in the Answer Testimony of Craig Cox in Docket No. 06S-234EG, pages 2-3, (see: <http://www.interwest.org/documents/documents/2006-08-18.pdf>). PSCo has known that its transmission service has been inadequate since 2004-5, when the Commission recognized that transmission for wind projects would likely be inadequate and authorized PSCo to pay curtailment payments to wind projects.

**15. We request that the Commission make the following determinations, approvals and orders:**

- i) The Commission should fashion its order in response to these comments so Colorado consumers are better served by an open and equitable process that considers all generation alternatives, provides transmission plans that open multiple options for bidding cost effective projects, and provides a diversity of options with goal of achieving the least-cost resources to consumers consistent with diversity that manages risks.
- ii) The Commission should find PSCo’s resource zones insufficient and substitute SB07-91 GDAs for PSCo’s filed zones.
- iii) The Commission should approve the Pawnee to Smoky Hill CPCN application if it can be shown at hearing and on the Commission’s record to be consistent with issues we raise in these comments, including the need for statewide, coordinated, long-term transmission planning.
- iv) The Commission should consider ordering additional transmission study, plans, and applications to be filed to diversify resource choices for the benefit of PSCo’s consumers.
- v) The Commission should require PSCo to file work plans, including timelines and interim reports, and identify the workforce or consultants it will apply to tasks, with attestation by PSCo officers that they have reviewed and are have committed PSCo to rapid and complete fulfillment of these tasks.
- vi) The Commission should require PSCo to hold additional stakeholder meetings and assign motivated regulatory staff to determine transmission needs for the seven SB07-91 GDAs. Based on better understanding of the resources in these GDAs, and more information about development interest, transmission options, and the state’s long term interests in exporting renewable energy resources to other states, PSCo should be required to plan the transmission “...necessary to deliver electric power consistent with the timing of the development of beneficial energy resources located in or near such zones.”

- vii) The Commission should supply proper regulatory motivation for repair of the breakdown within PSCo between generation and transmission planning.
- viii) The Commission should order PSCo to undertake transmission planning on specific timeframes for each GDA, motivate and require its staff supervise the process to ensure progress, and require monthly reporting by PSCo and Commission staff to closely monitor progress.

**16. SB07-100 was not passed by the legislature to ratify the current Colorado transmission planning and development “business as usual.” It was passed in recognition that transmission “business as usual” was not working and needed to be changed. Now it is the Commission’s responsibility to make the needed changes.**

**17. The Commission should order a hearing on PSCo’s SB07-100 report, and after a hearing and review of on-the-record comments submitted, order PSCo to plan and provide transmission necessary for Colorado’s New Energy Economy.**

Respectfully submitted,



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To Xcel Energy  
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**Comments of the Interwest Energy Alliance on SB 100 Implementation**

We agree with the comments filed by Invenergy, LLC. Invenergy makes the following comments:

1. Zone 1 should be subdivided to permit focus on potential wind development in the northeast and northwest sectors. Each sector will require a different mix of transmission additions.
2. By October 31, transmission projects should be identified to support potential wind generation in Zones 1, 2, and 3. The Xcel Energy plan to focus on Zone 1 will not meet the requirements of SB 100, and will not permit the development of wind resources in Zones 2 and 3 in the upcoming RFP in 2008.
3. The transmission projects developed for Zones 1, 2, and 3 should be related to the potential development within these zones. The Xcel plan to base these plans on projects in the transmission interconnection queue, believing that this is a proxy for the development potential, is fatally flawed. Xcel should drop its requirement that competitors submit confidential data.

We make the following additional comments:

1. The plans made to implement SB 100 should be coordinated with the Colorado Coordinated Planning Group. It is the purpose of the CCPG to coordinate transmission planning among Colorado utilities. The applications filed on October 31 should represent statewide coordinated transmission plans that are supported by all the state's utilities.
2. Planning and coordination that supports the October 31, 2007 filing should be consistent with plans for long-term resource development and export markets.

3. Xcel Energy's northern transmission intentions deserve support. Xcel's intentions are good as far as they go, but they need to go farther.
4. Xcel should analyze the resources in adjacent states and the needs for transmission to develop these resources.
5. Data about resources should support choices of resource development areas. By looking more carefully within the big Xcel areas for finer resolution on resources that have transmission needs, more focused, rational, and supportable transmission solutions might become apparent. The need to base resource areas on resource data applies to all Xcel resource regions identified to date. Specifically, Xcel should consider use of ten-year, hourly and three-year, ten-minute 80 meter wind data supplied by Windlogics that was used for Effective Load Carrying Capability (ELCC) and wind integration cost studies to construct wind resource areas based on data about wind resources. This report "Wind Integration Report for Public Service Company of Colorado," dated May 22, 2006, responding to settlement and PUC orders in Docket 04A-325E, is found at: <http://www.xcelenergy.com/docs/PSCoWindIntegStudy.pdf> and representations of study areas that should be considered for finer resolution of resources that need transmission are found on pages 10 to 13 of this study. Note the assumed gas prices on page 38 of the study averaged \$6.04 over the study year, 2007.
6. Data about exclusion areas should be gathered and reported, as we commented in a separate joint letter with The Nature Conservancy and Western Resource Advocates. There are some areas that are not appropriate for development because of ownership, land use, wildlife or habitat, or other reasons. Including this data in selecting resource areas for transmission planning could help define rational development areas.
7. Sole focus on transmission for a single area violates both the letter and the intention of SB 100. There is no provision in SB 100 that supports the notion of a single generation area as the sole focus for resource development or transmission investment. Generation resource diversity is the policy that SB 100 is intended to foster. Sole focus on a single area does not lead to generation resource diversity, but rather to its opposite: concentration. Concentration of resources in a single area will not lead to competitive results when bids are solicited.
8. There is record evidence in the previous "least cost" generation acquisition process that Xcel's lack of timely transmission investment led to bids for cost-effective wind resources being reduced or rejected. A detailed characterization of these transmission deficiencies, from the public version of Xcel's December 2005 All-Source RFP Bid Evaluation Report, is posted to our website at <http://www.interwest.org/documents/reports/2006-01-05.pdf>. SB 100 was designed to remedy this failure to make timely transmission investments. The evidence showed that wind resources in Northeast and Southeast Colorado were prevented from serving Colorado Xcel customers. SB 100 filings must remedy these failures.

**Shane Gutierrez**

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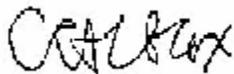
**15 May 2007**

9. Curtailment payments to wind generators were allowed by the PUC in the last bid round. Xcel should again request curtailment payment approvals from the Commission to guard against untimely provision of transmission in the upcoming bid round for the period 2012-2016.
10. There is no provision in SB 100 that allows utilities to defer needed transmission investments by waiting for the speculative transmission investments of other utilities to take place. Therefore, deferring planning of, and investment in, transmission in renewable resource areas because Tri-State is studying its resource and transmission plans in southeastern Colorado is unwarranted.
11. The 2006 CCPG Long Range Transmission Plan failed, by its own terms, to coordinate mutually exclusive “northern” and “southern” transmission scenarios. Continuing this division of the state between Xcel transmission plans and Tri-State transmission plans appears to be the present course of action for implementing SB 100. Instead, there should be one, coordinated, statewide transmission plan rather than two, mutually exclusive, uncoordinated plans.
12. Sizing transmission to meet needs of projects in transmission interconnection queues is inadequate. This was a major failure of the 2006 CCPG plan and should not be repeated in implementing SB 100.

The Interwest Energy Alliance looks forward to working constructively with Xcel Energy, the Public Utilities Commission, the Colorado state government, other utilities and all stakeholder parties in implementing SB 100 in the spirit intended by the legislature. The intent of this bill, which passed by large legislative majorities and which Governor Ritter signed into law in March, is to promote Colorado’s clean energy development through a more robust transmission infrastructure, to advance rural economies through new renewable energy development, and to lay the groundwork for exporting this clean, renewable power to other states in the region.

Thank you very much.

Sincerely,



Craig Cox  
Executive Director